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## The Unified Astronomy Thesaurus: Bringing Together People, Terms, and Organizations to Classify Infinity... and Beyond!

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# Classifying infinity... and beyond!

e-Sciences Symposium at the University of Massachusetts, April 9 2014. Presented by Katie Frey.

## Goals of the Unified Astronomy Thesaurus

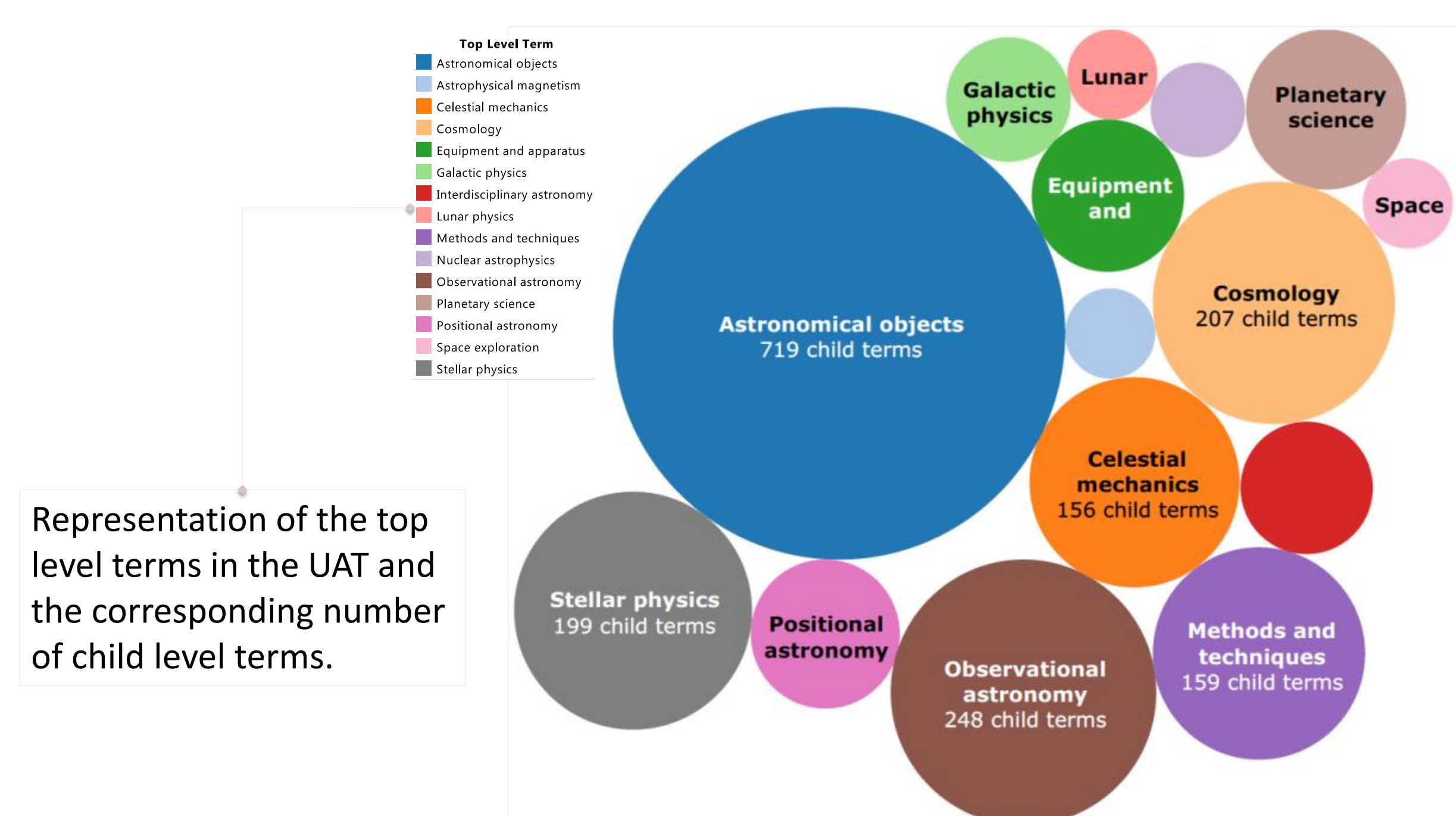
*The Unified Astronomy Thesaurus is an open, interoperable, and community-supported project that unifies the existing astronomy and astrophysics vocabulary into a freely-available thesaurus.*

**Open:** Anyone in the community can contribute by suggesting term additions, refinements, and revisions. The thesaurus is released under a Creative Commons license.

**Interoperable:** The thesaurus is maintained in SKOS and will be exportable in other formats. It can be used freely as an authority/reference to help define terms and understand how these terms are related to other concepts in astronomy and astrophysics.

**Community-supported:** The UAT is supported by major stakeholders in the astronomical community (including journal publishers, professional societies, and libraries, such as AIP, IoP, IAU, AAS, ADS, and the Wolbach Library).

## The Structure of the Unified Astronomy Thesaurus



Total number of concepts: 1906 | Top-level concepts: 15 | Depth: 7 levels

The majority of the terms in the UAT are currently located under the “Astronomical objects” top level concept. The distribution of terms may change as we refine and update the thesaurus.

### Get Involved!

The thesaurus is currently in beta while we finalize how the work will be managed and distributed (this will include a SKOS thesaurus). To express your interest in contributing to the UAT or using the UAT for development purposes, join the Google Group.

### Google Group:

<https://groups.google.com/d/forum/uat-users>

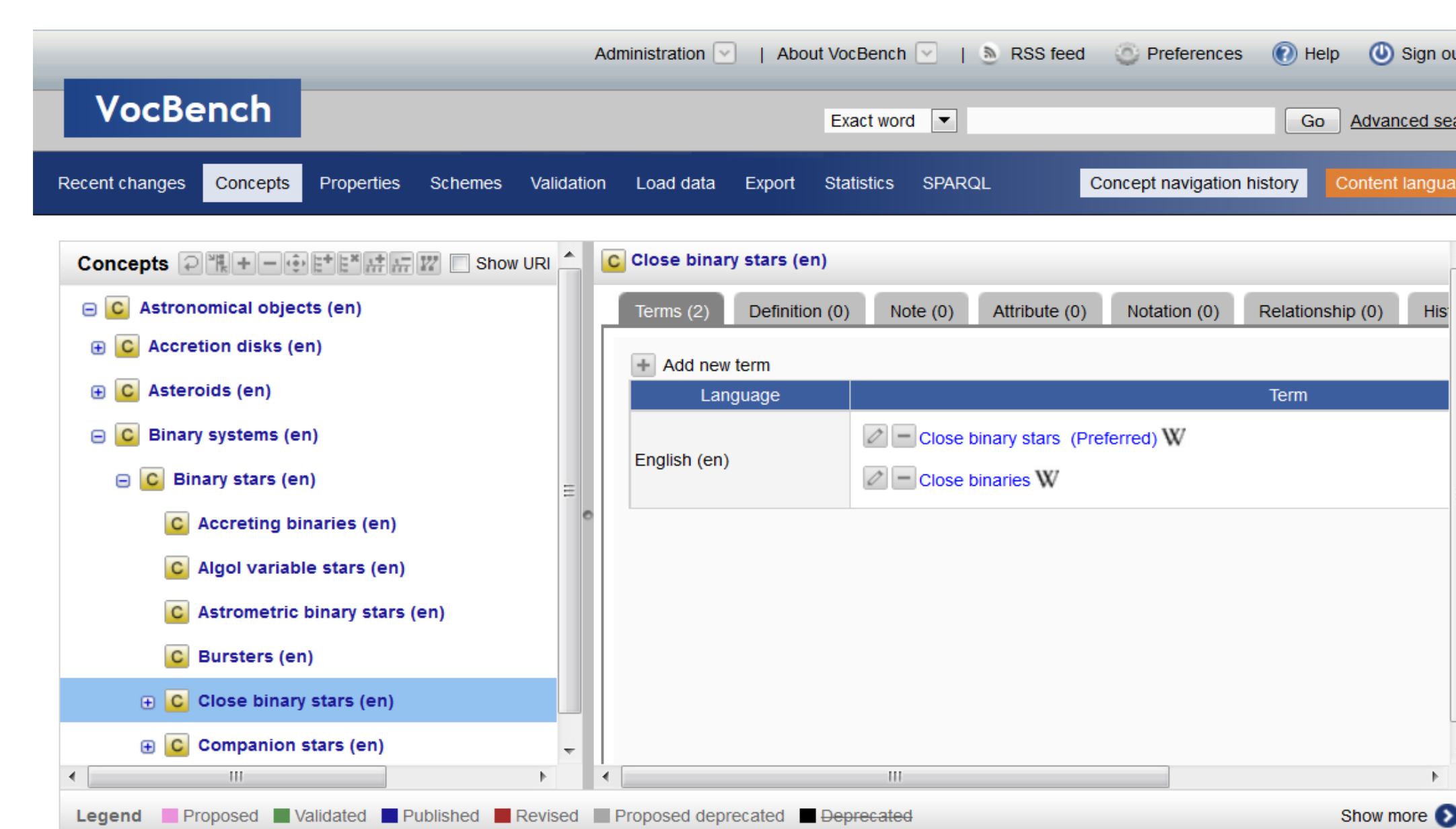
## Why Create a Unified Astronomy Thesaurus?

The main driver behind the creation of a single thesaurus is the wish to support semantic enrichment of the literature, but we anticipate broader use of the UAT in data and service discovery applications. We also believe that the UAT will underpin and inspire a new range of cross-system data-sharing applications.

## Data Sources for the Unified Astronomy Thesaurus

The UAT builds upon several pre-existing thesauri, including the IVOA Thesaurus (which evolved from the 1992 IAU Thesaurus), the Physics Astronomy Classification Scheme (PACS), and the astronomy journal keywords. The UAT will be further enhanced and updated through a collaborative effort involving broad community participation. Towards that goal, we have already incorporated the astronomy branch from the SPIE thesaurus.

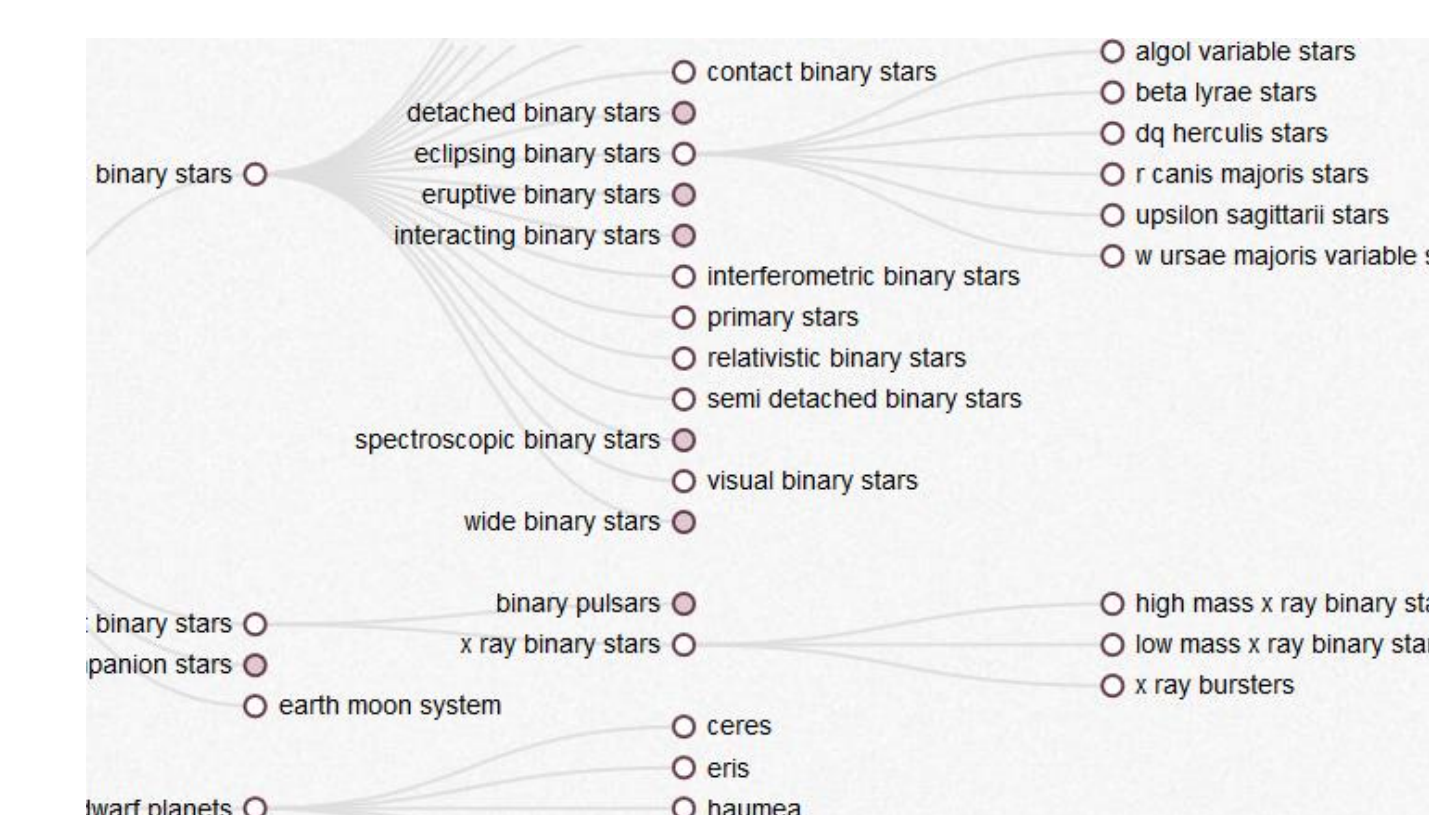
## Proposed Thesaurus Management Tool: VocBench



VocBench is a software platform that we are currently exploring for thesaurus management. Through this tool, users suggest changes to the UAT, which are then reviewed and discussed by a team of editors. The editors approve or reject each suggestion, and approved changes are released by the stewarding librarian at regular intervals. This platform also captures a detailed change history, maintaining the provenance of the term.

Our editorial team currently consists of a small group of astronomers and astrophysicists. We hope to grow our editorial team and open VocBench to receive public comments and suggestions from anyone interested in improving the Unified Astronomy Thesaurus.

## Browsing the Unified Astronomy Thesaurus

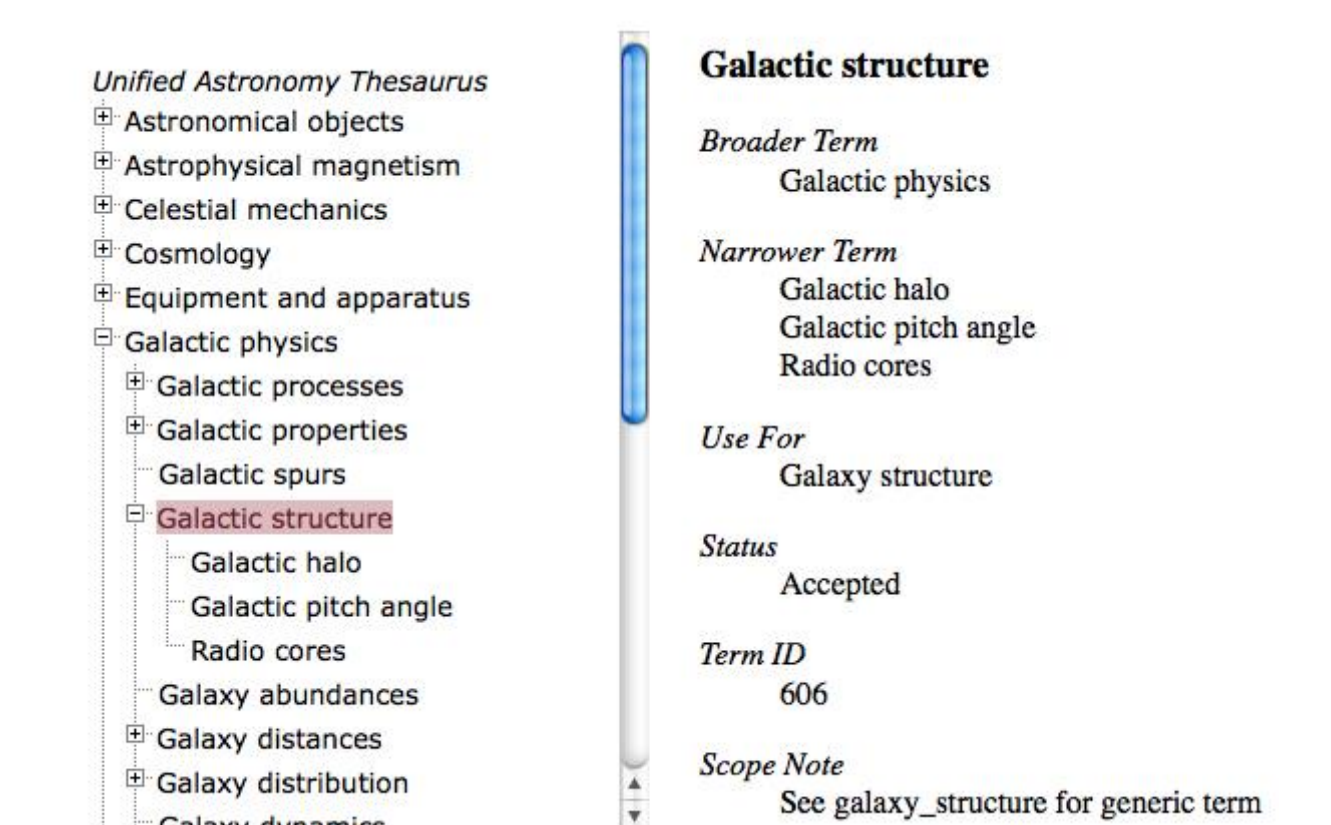


### Visual Browser

The relationships between words in the UAT are laid out in an easy to see manner. Clicking a term will either expand or collapse its child terms, allowing you to drill down through the thesaurus.

### Hierarchical Browser

This shows the thesaurus terms in context. Clicking on a specific term will bring up information such as broader, narrower, and related terms. You can also see the details for each term, like scope notes and synonyms.

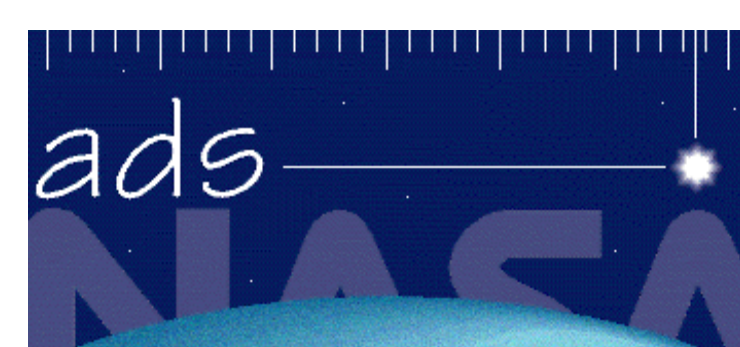


## Acknowledgements

The UAT is based on the 1992 IAU Thesaurus of Shobbrook and Shobbrook, with additions from Helen Knudsen, Marlene Cummins and Liz Bryson, influence from the consensus list of journal keywords, and, in the late-2000s, updating work by Rick Hessman under the auspices of the IVOA.

### Get the Thesaurus:

<http://astrothesaurus.org>



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